

Additional aspects of the present invention can provide optical structures. For example, first and second elongate liquid bumps can be provided on a substrate wherein the first and second elongate liquid bumps are parallel, and an optical fiber can be provided in contact with and between the first and second elongate liquid bumps. Alternatively, first and second optical components can define an optical path therebetween, and a liquid bump between the first and second optical components can be adapted to selectively interrupt and allow the optical path between the first and second optical components.

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BRIEF DESCRIPTION OF THE DRAWINGS

Figures 1A-C are plan and cross-sectional views illustrating vertical displacement of components by changing liquid volumes according to embodiments of the present invention.

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Figures 2A-C are plan and cross-sectional views illustrating lateral displacement of components by changing liquid volumes according to embodiments of the present invention.

Figures 3 and 4A-~~C~~^D are perspective and cross-sectional views illustrating displacements of fibers using elongate liquid bumps according to embodiments of the present invention.

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Figure 5 is a perspective view of adding liquid to a liquid bump according to embodiments of the present invention.

Figures 6A-E are plan and cross-sectional views illustrating sumps and reservoirs according to embodiments of the present invention.

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Figure 7 is a plan view illustrating alternate examples of reservoirs according to embodiments of the present invention.

Figures 8-11 are cross-sectional views illustrating displacement of components using liquid bumps according to embodiments of the present invention.

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Figures 12A-E and 13A-E are plan and cross-sectional views illustrating movement of liquid on a constrained symmetric surface using a temperature differential across the liquid according to embodiments of the present invention.